

Amendments to the Claims:

The following is a complete set of claims in this application, with markings indicating the changes introduced by the present amendment:

WHAT IS CLAIMED IS:

1 **Claim 1** (currently amended): Apparatus producing a self-regulating fluid bearing between a
2 rotor and stator, said apparatus comprising:
3 a pressure transducer [signal generating means] for generating an electrical [a]
4 signal representative of a pressure change within a gap between opposing
5 surfaces of said rotor and said stator, said pressure change being one that
6 is indicative of a displacement of said rotor caused by a load imposed on
7 said rotor;
8 a source of pressurized fluid;
9 a channel configured to convey fluid from said source of pressurized fluid to said
10 gap; and
11 fluid flow regulating means for regulating fluid flow through said channel in
12 response to said electrical signal to reduce said displacement.

1 **Claims 2-3** (canceled)

1 **Claim 4** (currently amended): The apparatus of claim 1 wherein said gap is defined as a first
2 gap, said pressure transducer [signal generating means] is defined as a first pressure transducer
3 [signal generating means], said electrical signal is defined as a first electrical signal, and said
4 channel is defined as a first channel, and said apparatus further comprises:
5 a second pressure transducer [signal generating means] for generating a second
6 electrical signal representative of a pressure change within a second gap
7 between opposing surfaces of said rotor and stator, said pressure change
8 being one that is indicative of a displacement of said rotor caused by a

9 load imposed on said rotor, said first and second gaps being on opposite
10 sides of said rotor, and
11 a second channel configured to convey fluid from said source of pressurized fluid
12 to said second gap,
13 said fluid flow regulating means regulating fluid flow through said first and second channels in
14 response to said electrical signals to reduce said displacements.

1 **Claims 5-6 (canceled)**

1 **Claim 7 (original):** The apparatus of claim 4 wherein said rotor has an axis of rotation and said
2 first and second gaps are separated along said axis of rotation, said pressure changes resulting
3 from an axial force on said rotor.

1 **Claim 8 (original):** The apparatus of claim 4 wherein said rotor has an axis of rotation and said
2 first and second gaps are separated along a line transverse to said axis of rotation, said pressure
3 changes resulting from a radial force on said rotor.

1 **Claim 9 (currently amended):** Apparatus producing a self-regulating fluid bearing between a
2 rotor and stator [The apparatus of claim 4 wherein said first and second signals are first and
3 second fluid flows at flow rates that are representative of fluid pressures within said first and
4 second gaps respectively, and said fluid flow regulating means is], said apparatus comprising:
5 first and second signal fluid flow signals representative of fluid pressures within first and
6 second gaps, respectively, on opposing surfaces of said rotor and stator and on
7 opposite sides of said rotor, such that changes in said pressures are indicative of a
8 displacement of said rotor caused by a load imposed on said rotor;
9 a source of pressurized fluid;
10 first and second channels configured to convey fluid from said source of pressurized fluid
11 to said first and second gaps, respectively; and
12 a bistable fluidic amplifier with individual inlets for said first and second fluid flows such
13 that a net inflow from said first fluid flow diverts pressurized fluid from said

14 source of pressurized fluid to said first channel and a net inflow from said second
15 fluid flow diverts said pressurized fluid to said second channel.

1 **Claim 10** (currently amended): Apparatus producing a self-regulating fluid bearing between a
2 rotor and stator [The apparatus of claim 4 wherein said first and second signals are first and
3 second fluid flows directly from said first and second gaps, and said fluid flow regulating means
4 is], said apparatus comprising:

5 means for generating fluid flows directly from first and second gaps, respectively,
6 between opposing surfaces of said rotor and stator and on opposite sides of said
7 rotor, said fluid flows being indicative of a displacement of said rotor caused by a
8 load imposed on said rotor;

9 a source of pressurized fluid;

10 first and second channels configured to convey fluid from said source of pressurized fluid
11 to said first and second gaps, respectively; and

12 a bistable fluidic amplifier with individual inlets for said first and second fluid flows such
13 that a net inflow from said first gap diverts pressurized fluid from said source of
14 pressurized fluid to said first channel and a net inflow from said second gap
15 diverts said pressurized fluid to said second channel.

1 **Claim 11** (original): The apparatus of claim 10 wherein said rotor has an axis of rotation and
2 said first and second gaps are separated along said axis of rotation, said pressure changes
3 resulting from an axial forces on said rotor.

1 **Claim 12** (original): The apparatus of claim 10 wherein said rotor has an axis of rotation and
2 said first and second gaps are separated along a line transverse to said axis of rotation, said
3 pressure changes resulting from radial forces on said rotor.

1 **Claim 13** (original): The apparatus of claim 4 wherein said stator is a laminate of platelets, said
2 first and second channels reside in said stator and are defined by superimposed openings in
3 adjacent platelets.

- 1 **Claim 14** (new): The apparatus of claim 10 wherein said stator is a laminate of platelets, said
2 first and second channels reside in said stator and are defined by superimposed openings in
3 adjacent platelets.